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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	33.323	34.123	56.551	-	56.551	36.592	32.827	33.569	34.157	Continuing	Continuing
0164: <i>Combat System Integration</i>	23.374	23.459	41.854	-	41.854	21.331	19.969	20.119	20.515	Continuing	Continuing
2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>	-	0.001	-	-	-	-	-	-	-	0.000	0.001
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	-	0.593	4.561	-	4.561	5.096	4.668	5.139	5.169	Continuing	Continuing
9999: <i>Congressional Adds</i>	9.949	-	-	-	-	-	-	-	-	0.000	9.949
9B88: <i>Automated Test and Re-Test</i>	-	10.070	10.136	-	10.136	10.165	8.190	8.311	8.473	Continuing	Continuing

A. Mission Description and Budget Item Justification

Chief of Naval Operations (CNO) created the Navy's Strike Force Interoperability (SFI) Program in 1998 in response to critical shortfalls in the introduction of integrated and interoperable system of systems to deploying Strike Forces. Naval Sea Systems Command (NAVSEA) acts as management lead for Joint System Command (SYSCOM) system certification policy and guidance and certifies platforms for interoperability within the platform and throughout the enterprise, in accordance with Commander, US Fleet Forces Command/Commander, Pacific Fleet (COMUSFLTFORCOM/COMPACFLT) Inst. 4720.3B (OCT 2008), C5ISR Modernization Policy. COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B also requires that NAVSEA act as administrative agent for COMNAVNETWARCOM Command and Control, Communications, Computers, and Combat Systems Integration Modernization Process (C5IMP) and execution agent for Navy Command and Control, Communications, Computers, and Combat Systems Integration (C5I) Modernization Conferences (NCCM). This program conducts Interoperability Assessments that are required to certify Aircraft Carriers, Amphibious Assault Ships, and Surface Combatants in accordance with the Naval Warfare System Certification Policy (NWSCP), NAVSEAINST 9410.2, NAVAIR 5230.20, SPAWAR 5234.1.

The SFI Program ensures overall strike force interoperability is characterized and assessed. NAVSEA is assigned central United States Navy (USN) responsibility for interoperability, directing the development of policy and architecture for Strike Force warfare systems engineering and implementation of a common warfare systems engineering process. There are three priorities within the Strike Force Interoperability Program: 1) Support Fleet As-Is state which includes Navigation System Certification (NAVCERT), Interoperability Capabilities & Limitations, and Interoperability Tactical Information Coordinator Technical Aids (TIC TECHAIDs); 2) Ship system modernization (non-HME) including warfighting capability & other C5I upgrades. This includes C5IMP Baseline Management and Non-Aegis Combat System Integration Testing; and 3) Ship Warfare System Certification & Force Level Assessments. This includes Warfare Certification, Interoperability Certification, and Force Level Interoperability Assessments.

In addition to these core efforts, this program also aims to improve the efficiency of testing processes through the Automated Test and Retest (ATRT) program and engages in efforts designed to ensure the U.S. Navy is interoperable with Joint and Coalition forces through the Maritime Theater Missile Defense (MTMD).

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>
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Budget exhibit has been updated to reflect recommendations, findings and requirements of the Flag Certification Task Force conducted October - November 2010.

Project 0164: Combat System Integration:

This project consist of five key pillars executed within the SFI program, beginning in FY13: 1) Command & Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness. The C5IMP validates the introduction of new systems into the Fleet and ensures system maturity prior to installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups; 2) Warfare Systems Certification, which is essential to validating the maturity and operational performance of warfare systems prior to fleet delivery and deployment; 3) Navigation Certification (NAVCERT) and Electronic Charting and Display System - Navy (ECDIS-N) certification, which certifies ship electronic charting capability and certifies the accurate transmission of navigation data to combat and weapons systems; 4) Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), which is essential in the identification of critical integration and interoperability issues. CSIT also provides Objective Quality Evidence (OQE) for warfare system certification decisions for installation and deployment; and 5) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessments examine force level engagement threads, aircraft control, air battle-space management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which is the cornerstone for the Distributed Integration & Interoperability Assessment Capability (DIIAC) Concept. It is a U.S. Fleet Forces Command and Commander In Chief, U.S Pacific Fleet (CINCPACFLT) requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. Interoperability Certification results are used to develop fleet tactical tools (Capabilities & Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems.

Project 3312: Maritime Theater Missile Defense Forum (MTMD):

This project funds participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended in 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations. This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project.

The MTMD forum provides protection against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the creation of an interoperable sea-based defense capability among coalition nations. This includes protection across the full spectrum of these threats through the enhanced utilization of existing sea-based systems to protect against current threats while progressively improving and developing systems and system-of- systems to effectively counter evolving threats.

MTMD supports USN participation in several MTMD related Project Arrangements and Working Groups including:

- (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures as well as to perform engineering to address coalition capability gaps.
- (2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing.
- (3) Coalition Distributed Engineering Plant (CDEP) to establish and maintain a maritime coalition Hardware-in-the-Loop Testbed and to conduct CDEP testing.

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
1319: <i>Research, Development, Test & Evaluation, Navy</i>	PE 0603582N: <i>Combat System Integration</i>
BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	

- (4) Open Architecture (OA) to develop Interface Standards and Data Models.
- (5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.
- (6) Operational Requirements (OR) to develop a Coalition Maritime Missile Defense Operational Concept Document and to identify operational constraints and tactical constructs surrounding coalition maritime missile defense activities.
- (7) Coalition Supersonic Sea-Skimming Targets (CSSST) to evaluate the conversion of excess TERRIER Missiles into low cost targets.
- (8) Next Generation Infrared Search and Track (IRST) to evaluate and commercial-based technologies to develop a passive IRST sensor system in support of coalition maritime missile defense operations.

Project 9B88: Automated Test and Retest (ATRT):

The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid Commercial Off The Shelf (COTS) Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology. ATRT is executed under Congressional Adds Project 9999 in FY11. Beginning in FY12, ATRT will be executed in Project 9B88 (Automated Test and Re-Test).

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	24.344	34.157	33.517	-	33.517
Current President's Budget	33.323	34.123	56.551	-	56.551
Total Adjustments	8.979	-0.034	23.034	-	23.034
• Congressional General Reductions	-	-0.034			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.840	-			
• Program Adjustments	-	-	23.355	-	23.355
• Rate/Misc Adjustments	-	-	-0.321	-	-0.321
• Congressional General Reductions Adjustments	-0.181	-	-	-	-
• Congressional Add Adjustments	10.000	-	-	-	-

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>
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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

Congressional Add: *AUTOMATED TEST AND RE-TEST*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	FY 2011	FY 2012
	9.949	-
	9.949	-
	9.949	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0164: <i>Combat System Integration</i>	23.374	23.459	41.854	-	41.854	21.331	19.969	20.119	20.515	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project 0164: Combat System Integration:

Budget exhibit has been updated to reflect recommendations and findings of the Flag Certification Task Force conducted October - November 2010.

This project funds the Strike Force Interoperability Program through the following pillars: 1) Command & Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness. The C5IMP validates the introduction of new systems into the Fleet and ensures system maturity prior to installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups; 2) Warfare Systems Certification, which is essential to validating the maturity and operational performance of warfare systems prior to fleet delivery and deployment; 3) Navigation Certification (NAVCERT) and Electronic Charting and Display System - Navy (ECDIS-N) certification, which certifies ship electronic charting capability and certifies the accurate transmission of navigation data to combat and weapons systems; 4) Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), which is essential in the identification of critical integration and interoperability issues. CSIT also provides Objective Quality Evidence (OQE) for warfare system certification decisions for installation and deployment; and 5) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessments examine force level engagement threads, aircraft control, air battle-space management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which is the cornerstone for the Distributed Integration & Interoperability Assessment Capability (DIIAC) Concept. It is a U.S. Fleet Forces Command and Commander In Chief, U.S Pacific Fleet (CINCPACFLT) requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. Interoperability Certification results are used to develop fleet tactical tools (Capabilities & Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Platform/Strike Force Certification	11.517	-	-
Articles:	0		
Description: This program conducts Interoperability Assessments that are required to certify Aircraft Carriers, Amphibious Assault Ships, and Surface Combatants in accordance with the Naval Warfare System Certification Policy (NWSCP), NAVSEAINST 9410.2, NAVAIR 5230.20, SPAWAR 5234.1 and U.S. Fleet Forces Command instruction 4720.3B. Using the Distribution Engineering Plant (DEP), this effort provides the Navy's only means to test Strike Force combat systems and associated Command, Control, Communications, Computers, and Intelligence (C4I) prior to deployment. All DEP efforts related to Platform/Strike Force Certification are funded in this article in FY11.			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>Interoperability Assessments to be funded under Interoperability Certification and Assessment pillar beginning in FY12. Certification decisions to be funded under Warfare System Certification pillar beginning in FY12.</p> <p>FY 2011 Accomplishments: Conducted Interoperability Assessments for 26 certification decisions involving Aircraft Carriers, Amphibious Assault Ships and Surface Combatants. In addition to crew support materials, this testing is required to enable early identification of critical interoperability issues involving the Cooperative Engagement Capability (CEC) and LINK 16. This afforded the systems engineering community the opportunity to impose software corrections and address design deficiencies prior to fleet delivery.</p>				
<p>Title: Fleet Response Plan (FRP)</p> <p>Description: This program is required to support the fleet C5I Modernization Policy, per Commander Fleet Forces Command (CFFC) 4720.3B, providing upfront systems engineering, configuration management, waterfront training and support for the entire surface Navy.</p> <p>C5I Modernization efforts to be funded under Command, Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) pillar beginning in FY12. Capabilities & Limitations (C&L) and TIC TECHAID to be funded under Interoperability Certification & Assessment pillar beginning in FY12.</p> <p>FY 2011 Accomplishments: Provided waterfront support for all CSGs and ARGs throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 3 ARGs and about 40 independent deployers during FY11. Facilitated the completion of C5I installations during approximately 100 Chief of Naval Operation (CNO) availabilities in FY 11. Provided C&L documents for 65 Strike Groups and 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDs were delivered for 35 SG ships and 30 independent ships.</p>		5.396 0	-	-
<p>Title: Combat Systems Certification Support of Platform Certification</p> <p>Description: This program funds Land-based Test Sites to conduct integration testing of Combat Systems for purposes of characterizing, certifying and deploying Combat Systems on Carriers and Large Deck Amphibious naval platforms.</p> <p>Integration and interoperability testing to be funded under Combat Systems Integration Testing (CSIT) pillar, formally known as Warfare Systems Integration and Interoperability Testing (WSI2T) beginning in FY12.</p>		2.442 0	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<i>FY 2011 Accomplishments:</i> Program conducted integration and interoperability testing for CVN 75 and accelerated testing for CVN 71/76, and CVN 69/70/77 major platforms.				
<i>Title:</i> Navigation System Certification (NAVCERT)				
<i>Description:</i> NAVSEAINST 9420.4 dated May 02 requires that a Navigation System Certification (NAVCERT) be performed for all initial installation/new construction, major overhaul/modification/repair when it is determined to impact the accuracy of navigation data, changes to the navigation baseline configuration, greater than six months ship availability, or elapsed time of more than five (5) years since previous NAVCERT. These project funds assessments are in support of NAVCERT associated with modernizations and/or new capability upgrades. A NAVCERT certifies to NAVSEA, Ship Program Managers (SPMs), Type Commanders (TYCOMs), and the Fleet that shipboard navigation systems are: properly installed and in good physical condition, operating to specified accuracy and requirements. A NAVCERT certifies ship electronic charting capability and verifies the accurate transmission of navigation data to combat and weapons systems. A successful NAVCERT is required for Warfare Systems Certification Decisions (WSCD), TOMAHAWK Weapons System (TTWCS) Certifications, Precision Approach Landing Systems (PALS) Certifications, and Electronic Charting and Display System-Navy (ECDIS-N) Certification.				
<i>FY 2011 Accomplishments:</i> Plans are to perform 25 NAVCERTs on cruisers, destroyers, carriers, and amphibians and will update NAVSEA Instruction 9420.4A to incorporate fleet input and lessons learned in FY10.				
<i>FY 2012 Plans:</i> Plans are to perform 22 NAVCERTs on cruisers, destroyers, carriers, and amphibians based on the finding of the Flag Certification Task Force.				
<i>FY 2013 Plans:</i> Plans are to perform 24 NAVCERTs on cruisers, destroyers, carriers, and amphibians based on the finding of the Flag Certification Task Force.				
<i>Title:</i> DEP Engineering and Operations				
<i>Description:</i> Distributed Engineering Plant (DEP) Engineering and Operations performs systems engineering, and operations functions to ensure DEP infrastructure supports testing of combat system baselines. The program conducts systems engineering				
<i>Articles:</i>		0.725 0	0.615 0	1.260 0
<i>Articles:</i>		3.294 0	-	-

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
to identify simulation/stimulation requirements necessary to achieve required fidelity for DEP testing at Navy laboratory sites through Verification, Validation and Accreditation (VV&A).				
DEP Engineering and Operations support to be funded under Interoperability Certification and Assessment in pillar beginning in FY12.				
FY 2011 Accomplishments: Program conducted one Interoperability Assessments: (SSDS O8.06.X) along with two(2) System Engineering Events (SEEs) in order to facilitate development testing for Aegis ACB 12 and validation of Surface Warfare Development Group Tactics, Techniques, and Procedures for deploying Carrier Strike Groups. Conducted improvements and updates to the DEP plant via two (2) Verification, Validation, and Accreditation (VV&A) events: Gateway Terminal Emulator/Common Connectivity Device/ Distributed Interactive Simulation (GTE/CCD/DIS) updates and associated VV&A to support U.S. and coalition requirements.				
Title: Command, Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness (C5ISR)		-	2.415 0	6.690 0
Articles:				
Description: This program is required to support the fleet C5ISR Modernization Policy, per COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B, validates the introduction of new systems into the Fleet and ensures system maturity prior to installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups. Project Engineers (PEs) and System Engineers (SEs) identify and analyze integration and interoperability issues in a Strike Group context, assessing operational impacts against fleet requirements, capabilities, and limitations and providing recommendations for resolution. On-Site Representatives (OSRs) are embedded with the FLTCDRs and TYCOMs and are utilized to address, coordinate and resolve C5IMP modernization issues.				
Funded under Fleet Response Plan (FRP) in prior years.				
FY 2012 Plans: Provide waterfront support for all CSGs and ARGs throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 4 ARGs and about 35 independent deployers during FY12. Facilitate completion of C5I installations during approximately 100 CNO availabilities in FY 12.				
FY 2013 Plans:				

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Provide waterfront support for all CSGs and ARGs throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 3 ARGs and about 40 independent deployers during FY13. Facilitate completion of C5I installations during approximately 100 CNO availabilities in FY 13. Support 3 NCMCs and 12 monthly baselining events.				
<p>Title: Combat System Integration Testing (CSIT)</p> <p>Articles:</p> <p>Description: This program funds Land-based Test Sites to conduct integration testing of Non-Aegis Combat Systems for purposes of characterizing, certifying and deploying Combat Systems on Carriers and Large Deck Amphibious naval platforms. Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), is essential in the identification of critical integration and interoperability issues. CSIT also provides Objective Quality Evidence (OQE) for warfare certification decisions for installation and deployment.</p> <p>Funded under Combat Systems Certification Support of Platform Certification in prior years.</p> <p>FY 2012 Plans: Program plans to conduct integration and interoperability testing for two major platforms: LHD 7/8 and LPD 22/23 (shifted CVN 69 testing to FY11 to allow LPD 22/23 test in FY12).</p> <p>FY 2013 Plans: Program plans to conduct integration and interoperability testing for eight (8) anticipated major configuration changes.</p>		-	2.720 0	4.954 0
<p>Title: Interoperability Certification and Assessment</p> <p>Articles:</p> <p>Description: In order for the Fleet to have confidence in the warfare systems performance of its Strike Force platform configurations prior to deployment, NAVSEA provides Strike Force Interoperability Certification and Assessments. This program focuses on new systems and platforms under development. Interoperability Assessments of deploying ships in Strike Force configurations is accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which provides operational configurations for all naval combat systems located at multiple Navy land-based sites located across the country and connected via networking technology. It is a U.S. Fleet Forces Command requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard delivery for operational use in surface combatant platforms and strike group units. Further, the DEP provides the mechanism to support the surface Navy's participation in the Joint testing environments as well as the MTMD Coalition forces interoperability testing. The Distributed Integration & Interoperability Assessment Capability (DIIAC) will leverage the existing DEP (facilities, skilled resources, live assets, and network connectivity) and ATRT applications to test and assess battle force interoperability. The results of DEP testing feed into the</p>		-	11.544 0	20.950 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
<p>development of fleet tactical tools (Capabilities & Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems. C&L are delivered for Strike Groups and their Coalition and Joint partners.</p> <p>Funded under Platform/Strike Force Certification, Fleet Response Plan (FRP), and DEP Engineering and Operations in prior years.</p> <p>FY 2012 Plans: Program plans to support three (3) Interoperability Assessments as determined by Interoperability Certification Committee (ICC) and three (3) SEEs in support of CVN-78 and Joint Interoperability in support of combat system developmental testing and validation of Fleet operational and training requirements. Facilitate completion of C5I installations during approximately 100 CNO availabilities in FY 12. Provide C&L documents for 65 Strike Groups comprised of 237 ships and 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDs will be delivered for 35 SG ships, 30 independent deploying ships and 4 Land Based Sites.</p> <p>FY 2013 Plans: Program plans to support four (4) Interoperability Assessments in support of deploying strike groups including the deployment of new combat system baselines (ACB12 and SSDS), three (3) SEEs (SEE 13-1, SEE 13-2, SEE 13-3), and two (2) VV&A events. Provide C&L documents for 65 Strike Groups comprised of 237 ships and 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDs will be delivered for 35 SG ships, 30 independent deploying ships, and 4 Land Based Sites.</p>				
<p>Title: Warfare Systems Certification</p> <p>Description: As directed by COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B, C5ISR Modernization Policy, and in accordance with NAVSEAINST 9410.2, Naval Warfare System Certification Policy (NWSCP), NAVSEA will conduct Warfare Systems Certification against set criteria that includes operational risk assessments, using Objective Quality Evidence (OQE) to ensure installation readiness and deployment readiness of warfare systems and Navy surface platforms. OQE is obtained through testimony of subordinate activities and/or independent testing.</p> <p>NAVSEA accomplishes these efforts through Warfare Systems Certification Readiness Reviews (WSCRR), Warfare Systems Installation Authorizations (WSIA), and Warfare Systems Certification Decisions (WSCD) to support the installation and deployment of warfare systems in Navy surface platforms. The purpose of the WSCRR is to review and approve the Warfare System Certification Plan (WSCP), monitor warfare systems against the WSCP and monitor satisfaction of established criteria to facilitate a WSIA and WSCD. The purpose of the WSIA is to provide an early assessment of risk and characterization of the</p>		-	6.165 0	8.000 0
		Articles:		

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
<p>warfare systems maturity and readiness to support sail-away and any shipboard test and training events for New Construction (NC) phase, Refueling Complex Overhaul (RCOH) or lead ships that are test platforms for major modernization effort and/or an assessment to support an authorization for installation of the warfare system(s) for in-service platforms. The purpose of the WSCD is to provide warfare systems certification including an assessment of risk and characterization of the warfare systems maturity and readiness to support deployment. A NAVSEA certification decision message is released following the WSCD, which includes an operational risk assessment characterizing warfare systems maturity and readiness to support the subject ship's deployment. This program is also required to ensure that aggregate deficiencies and workarounds do not render the operator ineffective.</p> <p>Strike Force Interoperability Officers (SFIOs) provide waterfront support to the Strike Groups by identifying, communicating, and resolving interoperability and modernization issues key to Strike Group readiness.</p> <p>Warfare Systems Certification funded under Platform/Strike Force Certification in prior years. SFIOs funded under Fleet Response Plan (FRP) in prior years.</p> <p><i>FY 2012 Plans:</i> Support 30 certification events, and will validate corrections of CEC/LINK 16 deficiencies prior to their installation in CGs and DDGs. Platform Certification Decision (PCDs) will involve CVN 78, CGs, DDGs, and amphibious assault ships.</p> <p><i>FY 2013 Plans:</i> Support approximately 110 Warfare Systems Certification Events (WSCRRs, WSIAAs, and WSCDs). Warfare Systems Certification Decision will involve CVNs, CGs, DDGs, ACB12, and amphibious assault ships. Support increase in number of Warfare System Certification criteria from 17 to 21, requiring review of Trouble Reports, Tactics, Techniques, and Procedures (TTP) aggregate workload assessment, and mission area assessment.</p>			
Accomplishments/Planned Programs Subtotals	23.374	23.459	41.854

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN 2960: <i>(ICSTD/DEP): Integrated Combat System Test Division/Distributed Engineering Plant</i>	4.421	4.441	4.495	0.000	4.495	4.534	4.581	4.658	4.739	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
<u>D. Acquisition Strategy</u> RD TEN funding under this line supports independent certification of the integration of major capability upgrades acquired by Program Executive Offices (PEOs) into host Navy Platforms and Strike Forces. The RD TEN engineering and certification activities at field sites do not involve direct procurement of equipment or engineering services, and hence no acquisition strategy is required. The major capability upgrades evaluated under this program fall under their associated PEOs' acquisition strategies.		
<u>E. Performance Metrics</u> Program Review		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SF Requirements Engineering & Analysis	WR	NSWCs:DN/PHD/Corona	5.157	-		-		-		-	0.000	5.157	
SF Requirements Engineering & Analysis	WR	Non-NSWCs:Various	5.295	-		-		-		-	0.000	5.295	
Platform/Strike Force Certification	WR	NSWCs:DD/ICSTD/DN/Corona	39.732	-		-		-		-	0.000	39.732	
Platform/Strike Force Certification	WR	Non-NSWCs:Various	27.843	-		-		-		-	0.000	27.843	
Fleet Response Plan (FRP)	WR	NSWCs:DD/PHD/DN	27.030	-		-		-		-	0.000	27.030	
Fleet Response Plan (FRP)	WR	Non-NSWCs:Various	3.793	-		-		-		-	0.000	3.793	
Combat Systems Cert ISO Platform Cert	WR	NSWCs:DN/DD/PHD/Corona	24.640	-		-		-		-	0.000	24.640	
Combat Systems Cert ISO Platform Cert	WR	Non-NSWCs:Various	1.853	-		-		-		-	0.000	1.853	
Navigation System Certification	WR	SPAWAR:Charleston	4.464	0.615	Dec 2011	1.260	Dec 2012	-		1.260	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	NSWCs:DD/PHD/DN	-	1.500	Dec 2011	5.925	Dec 2012	-		5.925	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	Non-NSWCs:Various	-	-		0.768	Dec 2012	-		0.768	Continuing	Continuing	Continuing
Warfare Systems Certification	WR	NSWCs:DD//DN/Corona	-	1.000	Dec 2011	4.455	Dec 2012	-		4.455	0.000	5.455	
Warfare Systems Certification	WR	NSWCs:Various	-	2.380	Dec 2011	0.600	Dec 2012	-		0.600	0.000	2.980	
CNI/Design Agent	SS/CPAF	General Dynamics:Not Specified	47.926	-		-		-		-	0.000	47.926	
CNI/Software Engineering	WR	NSWC:Dahlgren	8.383	-		-		-		-	0.000	8.383	
CNI/Test and Evaluation	WR	CDSA:Not Specified	3.922	-		-		-		-	0.000	3.922	
CNI/Systems Engineering	WR	NSWC:PHD	2.645	-		-		-		-	0.000	2.645	
CNI/Miscellaneous	WR	Various:Various	7.529	-		-		-		-	0.000	7.529	
OA Automated Test and Retest	WR	NSWCs:Various	17.500	-		-		-		-	0.000	17.500	
Contract Engineering Support	C/CPFF	Gryphon Technology:VA	12.259	3.878	Dec 2011	7.590	Dec 2012	-		7.590	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Program Management Support	C/CPFF	Delta Resources Inc.:VA	8.141	-		-		-		-	Continuing	Continuing	Continuing
Travel	Allot	NAVSEA HQ:Washington, DC	1.590	0.300	Dec 2011	0.421	Dec 2012	-		0.421	Continuing	Continuing	Continuing
Interoperability Fixes	WR	NSWCs:Various	1.500	-		-		-		-	0.000	1.500	
Subtotal			251.202	9.673		21.019		-		21.019			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DEP Engineering and Operations	WR	NSWCs:DD/SPAWAR/San	17.129	-	Dec 2011	-		-		-	0.000	17.129	
DEP Engineering and Operations	WR	NSWCs:Various	12.623	-	Dec 2011	-		-		-	0.000	12.623	
Combat System Integration Testing (CSIT)	WR	NSWCs:DD/ICSTF/DN	-	2.606	Dec 2011	2.885	Dec 2012	-		2.885	0.000	5.491	
Interoperability Certification & Assessment	WR	NSWCs:DD/SPAWAR/San	-	9.180	Dec 2011	15.950	Dec 2012	-		15.950	0.000	25.130	
Interoperability Certification & Assessment	WR	NSWCs:Various	-	2.000	Dec 2011	2.000	Dec 2012	-		2.000	0.000	4.000	
Subtotal			29.752	13.786		20.835		-		20.835	0.000	64.373	

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DAWDF	Various	Not Specified:Not Specified	0.311	-		-		-		-	0.000	0.311	
Subtotal			0.311	-		-		-		-	0.000	0.311	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>				PROJECT 0164: <i>Combat System Integration</i>				
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	281.265	23.459		41.854		-		41.854			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>

	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
COMBAT SYSTEMS INTEGRATION																												
CVN 75 TBV/CSIT (formerly known as WS12T)	■																											
CVN 71/76 TBV/CSIT			■	■																								
CVN 69/70/77 TBV/CSIT		■	■	■																								
AEGIS ACB 12 Integrated Testing DEMO #1 @ NSWC/DD				■																								
LHD 7/8 TBV/CSIT					■	■	■																					
FY 12 LPD 22/23 CSIT					■	■	■																					
AEGIS ACB 12 Integrated Testing DEMO #2 @ NSWC/DD										■	■	■																
CVN 68 CSIT											■	■	■															
CVN 69 CSIT											■	■	■															
LCS 2 CSIT											■	■	■	■														
LHD 2 CSIT															■	■	■	■										
LPD 22 CSIT													■	■	■													
LSD 41 Class CSIT													■	■	■													
CVN 75 CSIT													■	■	■													
FY13 DDG 1000 CSIT													■	■	■													
FY13 CVN 69 Interoperability Assessment													■	■	■													
LPD 22 Interoperability Assessment													■	■	■													
ACB 12 Interoperability Assessment													■	■	■													
FY13 AWS 8.1.0.0 Interoperability Assessment																■	■	■										
CVN 76 CSIT																											■	■

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
LHD 7 CSIT														■														
LPD 24 CSIT														■	■													
FY14 LSD 41 Class CSIT														■														
CVN 74 CSIT																												
LCS 3 CSIT																												
CVN 77 CSIT																												
LPD 26 CSIT																												
FY14 LHD 7 Interoperability Assessment																												
LCS 3 Interoperability Assessment																												
FY14 ACB 12 Interoperability Assessment																												
AWS 7.1 Interoperability Assessment																												
CVN 73 CSIT																												
LHD 6 CSIT																												
LPD 19 CSIT																												
FY15 LSD 41 Class CSIT																												
LCS 1 CSIT																												
FY15 CVN 75 CSIT																												
CVN 71 CSIT																												
FY 15 DDG 1000 CSIT																												
CVN 75 Interoperability Assessment																												
DDG 1000 Interoperability Assessment																												
FY15 ACB 12 Interoperability Assessment																												
AWS 8 Interoperability Assessment																												
FY16 CVN 77 CSIT																												
FY16 LHA 6 CSIT																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
LPD 18 CSIT																												
FY16 LSD 41 Class CSIT																												
CVN 72 CSIT																												
FY 16 LCS 2 CSIT																												
CVN 70 CSIT																												
LHD 5 CSIT																												
LPD 18 Interoperability Assessment																												
LCS 2 Interoperability Assessment																												
FY16 ACB 12 Interoperability Assessment																												
FY16 AWS 8 Interoperability Assessment																												
CVN 78 CSIT																												
FY17 LCS 1 CSIT																												
LHA 7 CSIT																												
LHD 4 CSIT																												
LPD 17 CSIT																												
FY17 LSD 41 Class CSIT																												
FY17 CVN 71 CSIT																												
FY17 CVN 69 CSIT																												
CVN 78 Interoperability Assessment																												
CVN 69 Interoperability Assessment																												
FY17 ACB 12 Interoperability Assessment																												
FY17 AWS 7.1 Interoperability Assessment																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
COMBAT SYSTEMS INTEGRATION				
CVN 75 TBV/CSIT (formerly known as WSI2T)	1	2011	1	2011
CVN 71/76 TBV/CSIT	3	2011	4	2011
CVN 69/70/77 TBV/CSIT	2	2011	4	2011
AEGIS ACB 12 Integrated Testing DEMO #1 @ NSWC/DD	4	2011	4	2011
LHD 7/8 TBV/CSIT	1	2012	2	2012
FY 12 LPD 22/23 CSIT	1	2012	2	2012
AEGIS ACB 12 Integrated Testing DEMO #2 @ NSWC/DD	1	2013	1	2013
CVN 68 CSIT	2	2013	3	2013
CVN 69 CSIT	2	2013	3	2013
LCS 2 CSIT	1	2013	3	2013
LHD 2 CSIT	4	2013	1	2014
LPD 22 CSIT	3	2013	4	2013
LSD 41 Class CSIT	2	2013	3	2013
CVN 75 CSIT	2	2013	3	2013
FY13 DDG 1000 CSIT	3	2013	4	2013
FY13 CVN 69 Interoperability Assessment	1	2013	1	2013
LPD 22 Interoperability Assessment	2	2013	2	2013
ACB 12 Interoperability Assessment	3	2013	3	2013
FY13 AWS 8.1.0.0 Interoperability Assessment	4	2013	4	2013
CVN 76 CSIT	4	2014	1	2015
LHD 7 CSIT	3	2014	3	2014

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
LPD 24 CSIT	2	2014	3	2014
FY14 LSD 41 Class CSIT	1	2014	1	2014
CVN 74 CSIT	4	2014	1	2015
LCS 3 CSIT	3	2014	4	2014
CVN 77 CSIT	4	2014	1	2015
LPD 26 CSIT	4	2014	1	2015
FY14 LHD 7 Interoperability Assessment	1	2014	1	2014
LCS 3 Interoperability Assessment	2	2014	2	2014
FY14 ACB 12 Interoperability Assessment	3	2014	3	2014
AWS 7.1 Interoperability Assessment	4	2014	4	2014
CVN 73 CSIT	3	2015	4	2015
LHD 6 CSIT	2	2015	3	2015
LPD 19 CSIT	4	2015	1	2016
FY15 LSD 41 Class CSIT	3	2015	4	2015
LCS 1 CSIT	1	2015	2	2015
FY15 CVN 75 CSIT	1	2015	2	2015
CVN 71 CSIT	1	2015	2	2015
FY 15 DDG 1000 CSIT	2	2015	3	2015
CVN 75 Interoperability Assessment	1	2015	1	2015
DDG 1000 Interoperability Assessment	2	2015	2	2015
FY15 ACB 12 Interoperability Assessment	3	2015	3	2015
AWS 8 Interoperability Assessment	4	2015	4	2015
FY16 CVN 77 CSIT	1	2016	2	2016
FY16 LHA 6 CSIT	3	2016	4	2016
LPD 18 CSIT	3	2016	1	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
FY16 LSD 41 Class CSIT	1	2016	2	2016
CVN 72 CSIT	4	2016	1	2017
FY 16 LCS 2 CSIT	4	2016	1	2017
CVN 70 CSIT	3	2016	4	2016
LHD 5 CSIT	4	2016	1	2017
LPD 18 Interoperability Assessment	1	2016	1	2016
LCS 2 Interoperability Assessment	2	2016	2	2016
FY16 ACB 12 Interoperability Assessment	3	2016	3	2016
FY16 AWS 8 Interoperability Assessment	4	2016	4	2016
CVN 78 CSIT	3	2017	4	2017
FY17 LCS 1 CSIT	2	2017	3	2017
LHA 7 CSIT	3	2017	4	2017
LHD 4 CSIT	3	2017	4	2017
LPD 17 CSIT	1	2017	3	2017
FY17 LSD 41 Class CSIT	1	2017	2	2017
FY17 CVN 71 CSIT	1	2017	2	2017
FY17 CVN 69 CSIT	3	2017	4	2017
CVN 78 Interoperability Assessment	1	2017	1	2017
CVN 69 Interoperability Assessment	2	2017	2	2017
FY17 ACB 12 Interoperability Assessment	3	2017	3	2017
FY17 AWS 7.1 Interoperability Assessment	4	2017	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>	-	0.001	-	-	-	-	-	-	-	0.000	0.001
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

These funds will be executed within Project 0164.

A. Mission Description and Budget Item Justification

N/A

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: New Accomplishment/Planned Program Entry	-	0.001	-
Articles:		0	
Description: These funds will be executed within Project 0164.			
FY 2012 Plans: N/A			
Accomplishments/Planned Programs Subtotals	-	0.001	-

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>				PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	-	0.593	4.561	-	4.561	5.096	4.668	5.139	5.169	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project funds participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended in 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations. This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project.

The MTMD forum provides protection against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the creation of an interoperable sea-based defense capability among coalition nations. This includes protection across the full spectrum of these threats through the enhanced utilization of existing sea-based systems to protect against current threats while progressively improving and developing systems and system-of- systems to effectively counter evolving threats.

MTMD supports USN participation in several MTMD related Project Arrangements and Working Groups including:

- (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures as well as to perform engineering to address coalition capability gaps.
- (2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing.
- (3) Coalition Distributed Engineering Plant (CDEP) to establish and maintain a maritime coalition Hardware-in-the-Loop Testbed and to conduct CDEP testing.
- (4) Open Architecture (OA) to develop Interface Standards and Data Models.
- (5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.
- (6) Operational Requirements (OR) to develop a Coalition Maritime Missile Defense Operational Concept Document and to identify operational constraints and tactical constructs surrounding coalition maritime missile defense activities.
- (7) Coalition Supersonic Sea-Skimming Targets (CSSST) to evaluate the conversion of excess TERRIER Missiles into low cost targets.
- (8) Next Generation Infrared Search and Track (IRST) to evaluate and commercial-based technologies to develop a passive IRST sensor system in support of coalition maritime missile defense operations.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Maritime Theater Missile Defense Forum (MTMD)	-	0.593	4.561
Articles:		0	0
Description: This project funds participation in the MTMD forum to promote interoperability with participating coalition nations. This project funds participation in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications,			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>		PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2011
Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR), Coalition Supersonic Sea-Skimming Targets (CSSST), and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.				
FY 2012 Plans: To participate in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR), Coalition Supersonic Sea-Skimming Targets (CSSST), and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.				
FY 2013 Plans: To participate in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR), Coalition Supersonic Sea-Skimming Targets (CSSST), and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.				
Accomplishments/Planned Programs Subtotals				-
				0.593
				4.561
C. Other Program Funding Summary (\$ in Millions)				
N/A				
D. Acquisition Strategy				
N/A				
E. Performance Metrics				
Program Review				

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MTMD - MARITIME THEATER MISSILE DEFENSE FORUM				
Modeling & Simulation (M&S) Test #1	1	2012	4	2012
Coalition Distributed Engineering Plant (CDEP) Working Group Interoperability Test #1	1	2012	4	2012
Test Planning and Execution (TPEX) At-Sea Event #1	1	2012	4	2012
Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I)	1	2012	4	2012
Baseline Architecture Deliverable	1	2012	4	2013
Operational Requirements (OR) At-Sea Exercise	1	2012	4	2012
Modeling & Simulation (M&S) Test #2	1	2013	4	2013
Modeling & Simulation (M&S) Test #3	1	2013	4	2013
CDEP Working Group Interoperability Test #2	1	2013	4	2013
TPEX At-Sea Event #2	1	2013	4	2013
-BMC4I Target Architecture Deliverable #1	1	2013	4	2013
Modeling & Simulation (M&S) Test #4	1	2014	1	2014
CDEP Working Group Interoperability Test #3	1	2014	1	2014
TPEX At-Sea Event #3	1	2014	1	2014
BMC4I Target Architecture Deliverable #2	1	2014	1	2014
TPEX At-Sea Demo	1	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>				PROJECT 9999: <i>Congressional Adds</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	9.949	-	-	-	-	-	-	-	-	0.000	9.949
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Automated Test and Re-Test (ATRT)

A. Mission Description and Budget Item Justification

The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration Testing (CSIT), formally known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid Commercial Off The Shelf (COTS) Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

B. Accomplishments/Planned Programs (\$ in Millions)

Congressional Add: AUTOMATED TEST AND RE-TEST

FY 2011 Accomplishments: ATRT proposals and objectives were prioritized by an Executive Steering Committee (ESC) for the implementation of ATRT by the contractor and to transfer an automated test capability through training to the respective government programs. The projects and tasking selected to receive ATRT start-up dollars are the following:

Combat Systems Integration Testing (CSIT), formally known as Warfare Systems Integration and Interoperability Testing (WSI2T)- NAVSEA) Use ATRT to develop a "self-throttling" test capability for use in CSIT for Ship Self Defense System (SSDS).

AEGIS (Part I) - (PEO IWS) Apply ATRT to at-sea testing analysis to extend coverage of AEGIS 3.2 requirements (combat system level) and update scenario manager to assist with land-based testing for Advanced Capability Build (ACB) 08 and ACB 12 baselines.

	FY 2011	FY 2012
Congressional Add: AUTOMATED TEST AND RE-TEST	9.949	-

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9999: <i>Congressional Adds</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012
Integrated Common Processor (ICP) / Acoustic Rapid COTS Insertion (A-RCI) - (PEO LMW/SUB) ICP and A-RCI use common software components from submarine and surface USW systems. PMS 485 and 401 have developed plan for combined project.		
LCS Mission Module (MM)-Seaframe (Part I) - (PEO LMW) Apply ATRT to automate message-based interface testing between LCS MM and Seaframe Combat Management System (CMS). Focus on MM messaging and minimal required CMS messaging.		
Development of specifications, standards, and FY12 proposal content. This information will be a product of the future ATRT work group with collaboration from other ATRT users within the community.		
Congressional Adds Subtotals	9.949	-

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

The Program Strategy for the ATRT program includes the following:

- Investigation of applicable similarities to industry standards, specifications, and processes that are relevant to ATRT program to recognize best practices and leverage opportunities
- Development of standards and specifications for ATRT tools/processes
- Funding and execution of ATRT startup projects within acquisition programs per submission of proposals and Business Case Analyses (BCA)
- Development of training and outreach efforts to promote awareness of automated testing and analysis body of knowledge and available tools/processes
- Setup and maintain an ATRT portal for the collection and dissemination of body of knowledge
- Produce Contract Language Guidebook for ATRT

E. Performance Metrics

Progress towards meeting the objectives of the ATRT efforts will be monitored via the following:

- Progress Briefs at Quarterly ATRT Stakeholders Meetings
- Program Technical Reviews
- Return on Investment (ROI) metrics based on testing and analysis level of effort (LOA) - before and after implementation of ATRT
- Return on Investment Metrics based on work hours for test process execution - before and after automation

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9B88: <i>Automated Test and Re-Test</i>	-	10.070	10.136	-	10.136	10.165	8.190	8.311	8.473	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid COTS Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013
Title: Automated Test and Re-Test	-	10.070	10.136
Articles:		0	0
<p>Description: The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid COTS Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.</p> <p>FY 2012 Plans: Establish the Automated Test and Re-Test (ATRT) working group for continued development of ATRT standards, specifications, and guidance. Provide guidance to startup projects for the implementation of the ATRT capability. Collect lessons learned for ATRT. Conduct outreach efforts to NAVSEA programs and industry for ATRT implementation across the warfare domains. Develop procedure to quantify improved quality of the system under test, and create a general proposal/ business case analysis template for future startup efforts.</p> <p>FY 2013 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
To sustain the Automated Test Re-Test (ATRT) work group for continued development and improvement of ATRT standards, specifications, and guidance through thorough investigations of shared lessons learned from NAVSEA and other SYSCOMs. Provide guidance to startup projects for the implementation of the ATRT capability. Enhance training modules and best practice methods for ATRT. Conduct outreach efforts to NAVSEA programs and industry for ATRT implementation across the warfare domains.			
Accomplishments/Planned Programs Subtotals	-	10.070	10.136

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

The Program Strategy for the ATRT program includes the following:

- Investigation of applicable similarities to industry standards, specifications, and processes that are relevant to ATRT program to recognize best practices and leverage opportunities
- Development of standards and specifications for ATRT tools/processes
- Funding and execution of ATRT startup projects within acquisition programs per submission of proposals and Business Case Analyses (BCA)
- Development of training and outreach efforts to promote awareness of automated testing and analysis body of knowledge and available tools/processes
- Setup and maintain an ATRT portal for the collection and dissemination of body of knowledge
- Produce Contract Language Guidebook for ATRT

E. Performance Metrics

Progress towards meeting the objectives of the ATRT efforts will be monitored via the following:

- Progress Briefs at Quarterly ATRT Stakeholders Meetings
- Program Technical Reviews
- Return on Investment (ROI) metrics based on testing and analysis level of effort (LOA) - before and after implementation of ATRT
- Return on Investment Metrics based on work hours for test process execution - before and after automation

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9B88				
Automated Test and Re-Test (ATRT): Development of ATRT Reference Model	1	2012	1	2012
Automated Test and Re-Test (ATRT): Annual Startup Projects for ATRT Implementation	1	2012	4	2017
Automated Test and Re-Test (ATRT): Development of ATRT standards and specifications	1	2012	4	2017
Automated Test and Re-Test (ATRT): Participation in Existing Government and Industrial Standards Boards	1	2012	4	2017
Automated Test and Re-Test (ATRT): Evaluation of Business Case Analyses (BCA) of potential ATRT investments	1	2012	4	2017
Automated Test and Re-Test (ATRT): Development of training and lessons learned for ATRT	1	2012	4	2017
Automated Test and Re-Test (ATRT): Development of guidance for contract and requirements language pertaining to ATRT	1	2012	4	2017
Automated Test and Re-Test (ATRT): Conduct of outreach efforts to NAVSEA programs and industry	1	2012	4	2017
Automated Test and Re-Test (ATRT): ATRT Portal for Body of Knowledge	1	2012	4	2017